

Appl. No. 10/751,491
Amdt. dated Feb. 18, 2009
Reply to Office action of Dec. 23, 2008

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REMARKS/ARGUMENTS

Claim 1-16 are pending in the application. Claims 2, 4, 8, 10, 13 and 14 are withdrawn from consideration. Claims 1, 3, 5-7, 9, 11, 12, 15 and 16 are finally rejected.

Claims 1, 3, 5-7, 9, 11, 12, 15 and 16 stand finally rejected in the Examiner's Action dated December 23, 2008 (hereinafter "the Examiner's Action"). The examiner states Applicant's arguments, filed 9/30/08 with respect to the rejection of claims 1, 3, 5-7, 9, 11-12, 15-16 under patent 10/505,403, have been fully considered and are persuasive and the rejection has been withdrawn. However, the Examiner states upon further consideration, a new ground of rejection is made in view of Pfaffinger et al., US Patent 7, 123, 724 B1 (hereinafter "Pfaffinger").

In response herein, Applicants submit that the status of the Examiner's Action is prematurely a final rejection and request status as a final rejection be withdrawn. MPEP 706.07(a) states "...second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims, nor based on information submitted in an information disclosure statement....." In the Examiner's Action Pfaffinger is a "new ground of rejection" (Examiner's Action, page 2, paragraph 1) that was not included in Applicant's information disclosure statement or previously cited by the Examiner. Accordingly, Applicants request the status of the Examiner's Action as a final rejection be withdrawn.

The Examiner states claim 1 is rejected under 35 USC 102(e) as being anticipated by Pfaffinger. The Examiner states Re claim 1, Pfaffinger discloses an inexpensive, programmable, frequency independent amplitude and phase shifting circuit comprising: an enclosure comprising: a plurality of signal sending digital control lines routed to an amplitude/phase shifting circuit board; and means for selecting a single amplifier for operator selected amplitude or phase gain change; an amplitude/phase shifting circuit board comprising: a plurality of programmable gain operational amplifiers, one amplifier selected at a time to have its gain changed when an operator desires a new amplitude or phase; each of said digital control lines connected to a different multiplying operational amplifier chip select line on said

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amplitude/phase shifting circuit board; and means for controlling said amplitude/phase shifting circuit; means for holding printing circuit boards and a front panel for receiving input and output signals; a motherboard comprising: means for supplying input signals through said front panel; a power source; digital control lines; and a demultiplexer circuit board; said demultiplexer circuit board within said motherboard comprising: a plurality of signal receiving digital control lines from a digital output card in a personal computer; and a plurality of signal receiving digital control lines for receiving output lines from said demultiplexer.

In response to the Examiner's 35 USC section 102 rejection, Applicants submit that every element of Applicants' claim was not disclosed in the Pfaffinger patent. Applicants respectfully submit that the Examiner's reliance on Pfaffinger is misplaced. Applicants submit that the Examiner is relying on a mathematic principle known in the art for altering phase and amplitude of signals that both the Pfaffinger patent and Applicants' invention disclose, however, Pfaffinger patent does not disclose each and every element of Applicants' claim 1, as is required for a 35 USC 102(e) rejection.

Pfaffinger does not teach or disclose how phase and amplitude control are accomplished. Pfaffinger does not disclose Applicants' claim 1, line 18 element:

"an amplitude/phase shifting circuit board comprising:

a plurality of programmable gain operational amplifiers, one amplifier selected at a time to have its gain changed when an operator desires a new amplitude or phase; and

a plurality of signal receiving digital control lines for receiving output lines from said demultiplexer, each of said digital control lines connected to a different multiplying operational amplifier chip select line on said amplitude/phase shifting circuit board."

While the Examiner states Pfaffinger, col 3, lines 24-49 discloses claim 1, line 18 element, it discloses nothing about "one amplifier selected at a time to have its gain changed when an operator desires a new amplitude or phase." In Pfaffinger, col 3, lines 24-49 mentions "power amplifiers" and "amplification" but does not disclose how phase and amplitude are controlled, a significant aspect of Applicant's invention claimed in claim 1.

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Additionally, the Examiner states Pfaffinger, col. 2, line 16-23 discloses "means for selecting a single amplifier for operator selected amplitude or phase gain change" (a portion of Applicants' invention, claim 1, line 16), however, Applicants respectfully submit Pfaffinger has not disclosed "means for selecting a single amplifier for operator selected amplitude or phase gain change over a single frequency or sweep in frequency"; and therefore has not disclosed each and every element of Applicants' claim 1 invention. The Examiner has not even included Applicants' entire claim 1, line 16 element, Applicants' amended claim 1, line 16 language "over a single frequency or sweep in frequency" in its argument of how Pfaffinger discloses Applicants' invention under 35 USC 102(e). Indeed, Applicants respectfully submit that the Examiner's omission of this significant element of Applicants' claim 1, supports Applicants' argument that each and every element of claim 1 is not disclosed in Pfaffinger and therefore overcomes the Examiner's 35 USC 102(e) rejection. Beyond the omission from the Examiner's argument of each and every element of Applicants' claim 1 in its 35 USC 102(e) argument, Applicants submit that Pfaffinger does not identify a means or capability for a user to program with precision multiple signals of "the same frequency or simultaneously sweeping in frequency" as the Applicants' invention claims and discloses on page 2, paragraph [0002] and page 3, paragraph [0007] and claim 1(amended), line 17. Application 602 details embodiments for controlling phase and amplitude of multiple sinusoidal signals, as many as 112 are cited in paragraph [0008] and shown in FIG 2 using a specific arrangement of circuits having a user interface under computer control. Paragraph [0030] states "The amplitude and phase shifting circuit can be used for any application where multiple sinusoidal signals with different amplitudes and phases but identical frequencies are required." This depth of design specialization is necessary to demonstrate a system capable for use in structural dynamics. Again, in contrast to Pfaffinger, Application 602 claims the signals are constant or swept sinusoidal voltages and does not make any claim or anticipation of suitability for presenting signals to loudspeakers in associated pairs to accomplish stereophonic perception. Applicants respectfully submit that these remarks of argument and explanation overcome the Examiner's 35 USC 102(e) rejection.

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The Examiner states claims 3, 5-6, 9, 11-12 15-16 are rejected under 35 USC 103(a) as being unpatentable over Pfaffinger. The Examiner states Re Claim 3 further recites "Wherein said enclosure mounts onto a standard electronics rack." The Examiner states while Pfaffinger fails to disclose mounting an enclosure on a standard electronic rack, official notice is taken that both the concepts and advantages of using an electronic rack are well known in the art and it would have been obvious to use an electronic rack for the purpose of having a portable electronic device. In response herein, claim 3 is dependent on claim 1, and Applicants respectfully submit claim 1 is in form for allowance based on remarks of argument and explanation above overcoming the Examiner's 35 USC 102(e) rejection, so dependent claim 3 is allowable because it depends on an allowable base claim. And because the Examiner has not made a 35 USC 103(a) rejection of claim 1, if an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending there from is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

As previously discussed, Applicants submit that independent claims 1 is patentable over Pfaffinger under 35 USC 102(e). Based on at least their dependencies, Applicants submit that claims 3, 5-6, 9, 11-12 15-16 are patentable as well.

The Examiner states Re Claim 5 further recites "Wherein said means for controlling said amplitude/phase shifting circuit comprises a digital output card from a personal computer." The Examiner states while Pfaffinger fails to disclose a digital output card from a computer, it would have been obvious to use a computer (i.e. cell phone) since computers are commonly used for signal processing. In response herein, claim 5 is dependent on claim 1, and Applicants respectfully submit claim 1 is in form for allowance based on remarks of argument and explanation above overcoming the Examiner's 35 USC 102(e) rejection, so dependent claim 5 is allowable because it depends on an allowable base claim.

The Examiner states Re Claim 6 "Wherein said demultiplexer further comprises a 50-pin ribbon cable connector for accepting digital control lines coming from digital output card in a personal computer." The Examiner states while Pfaffinger fails to disclose a 50-pin ribbon cable as Applicants' claim, official notice is taken that both the concepts and advantages of providing a 50-pin ribbon cable are well known in the art. Thus, it would have been obvious to use a 50-

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pin ribbon cable since they are commonly used as input output adapters. In response herein, claim 6 is dependent on claim 1, and Applicants respectfully submit claim 1 is in form for allowance based on remarks of argument and explanation above overcoming the Examiner's 35 USC 102(e) rejection, so dependent claim 6 is allowable because it depends on an allowable base claim.

The Examiner states claims 7 and 9 have been analyzed and rejected according to claim 5. In response herein, claims 7 and 9 are dependent on claim 5, and Applicants respectfully submit claim 5 is in form for allowance so dependent claims 7 and 9 are allowable because they depend on an allowable base claim. The Examiner states claim 9 is rejected according to claim 5. In response herein, Applicants respectfully submit claim 5 is in form for allowance based on remarks of argument and explanation above overcoming the Examiner's 35 USC 102(e) rejection, so dependent claims 7 and 9 are allowable because they depend on an allowable base claim.

The Examiner states claim 15 has been analyzed and rejected according to claims 2 and 5. In response herein, Applicants respectfully submit claim 2 has been withdrawn from consideration, so Applicants will assume the Examiner analyzed and rejected claim 15 according to claim 5. In response, Applicants respectfully submit claim 5 is in form for allowance based on remarks of argument and explanation above overcoming the Examiner's 35 USC 102(e) rejection, so dependent claim 15 is allowable because it depends on an allowable base claim.

The Examiner states claims 11 and 12 have been analyzed and rejected according to claims 5-6. In response herein, Applicants respectfully submit claim 5 and 6 are in form for allowance based on remarks of argument and explanation above overcoming the Examiner's 35 USC 102(e) rejection, so dependent claims 11 and 12 are allowable because they depend on allowable base claims.

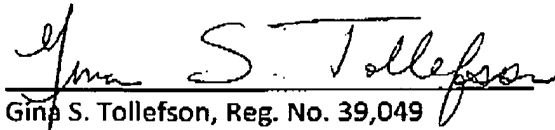
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The Examiner states claim 16 has been analyzed and rejected according to claims 1 and 5. In response, Applicants respectfully submit claims 1 and 5 is in form for allowance based on remarks of argument and explanation above overcoming the Examiner's 35 USC 102(e) rejection, so dependent claim 16 is allowable because it depends on allowable base claims.

Respectfully submitted,



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